

Implementing a dispensary in a rural area in Benin. Comparison between the new private centre and the old public centre's consultation

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ABSTRACT

We present an example of a busy dispensary that provides nutritional care, outpatient services for all ages, treatment for medical emergencies, surgery and long term hospitalisation in a rural area of western Africa already covered by local tertiary care centres. We compare the different diagnoses in our dispensary in Zagnanado (Benin) and the public centres of the region. The main change observed is the success of the integration of a new private health centre that is fully equipped and ready to assist the population. The increasing demand and sustained investments have brought the patients to consider this dispensary as a reference for all health problems. We can see that private health care is essential to accurately estimate the burden of disease in developing countries not only in preventive and curative care but also in health education, which is essential in such settings and often not taken into consideration.

Key Words: Health services organisation and administration; Developing countries; Emergency and medical service; Ambulatory care.

RESUMEN

Puesta en marcha de un centro hospitalario en un área rural de Benín. Estudio comparativo con el centro público existente

Mostramos un ejemplo de implantación de un centro hospitalario con gran presión asistencial en una zona rural de África Occidental, donde ya existían centros de salud locales, que desarrolla actividades programadas y urgentes, tanto en las áreas de hospitalización como en las consultas externas, y proporciona desde actividad quirúrgica a cuidados nutricionales de la población a cualquier edad. A continuación comparamos los diferentes diagnósticos realizados en las consultas de nuestro dispensario en Zagnanado (Benín) y aquellos realizados en los centros públicos de la región. Los resultados obtenidos muestran el éxito de la integración del nuevo centro que está completamente equipado y listo para atender a la población. La demanda de los pacientes y la aportación continua de recursos han permitido que el centro disponga de una infraestructura y un equipamiento adecuado y hoy está considerado como punto de referencia para los problemas de salud de la región. Podemos observar que los centros de salud privados son esenciales para estimar fielmente la carga de enfermedad en los países en vías de desarrollo, algo necesario no sólo con fines curativos y preventivos sino también para las labores de educación en salud que a menudo no se tienen en cuenta en estos escenarios.

Palabras clave: Organización y administración de los servicios sanitarios; Países en vías de desarrollo; Cuidados médicos urgentes; Ambulatorios.

1. INTRODUCTION

Hospitals in less-developed countries tend to have large numbers of patients and limited staff or resources. Information about the needs of patients, the burden of many diseases and the magnitude of the health services provided are sparse or not available. Every day, international health organisations recognise and face the fact that new health care services are needed in Western Africa, especially in rural areas.

The University Rey Juan Carlos (Spain) has been cooperating with the Centre Gbemontin (Benin) for more than 10 years. The Centre Gbemontin is a 150 bed-hospital in a rural area in inland Benin. It serves the municipality of Zagnanado, which counts around 39.000 inhabitants, and is taking in more and more patients from the department of Zou (1.400.000 inhabitants) and even Benin's border countries such as Togo or Nigeria. Patients from other countries come especially for the treatment of Buruli Ulcer: the World Health Organization (WHO) has acknowledged the hospital as a pilot centre in the treatment of this illness (1).

The national health care system in Benin is structured in three levels: the central or national level, the departmental level and the peripheral level. The peripheral level is completely decentralised, is formed by a net of primary health care service (2) and is represented in Zagnanado with one Municipal Health Centre (Complexe Communal de Santé, CCS). This CCS holds just a few beds for long-term hospitalisation and several primary health day-centres in the different villages, and it is clearly insufficient for providing basic health care to the local population. However, there are a significant number of maternity and childbirth units in the area, which is the reason why the hospital of Gbemontin does not include this service.

In Benin, the density of physicians per 1.000 inhabitants is 0.045, far below the 0.217 density of the WHO African Region. The access to improved sanitation in rural areas of Benin is just 12% (28% for the WHO African Region). Moreover, one-fifth of the human health resources is devoted to the capital city. Private expenditure on health represents 44.4% (data of 2005) of the total expenditure on health. That means that private investments are vital for the country's health (3).

2. METHODS

Our goal was to compare the different treatments offered by the private and public centres in Zagnanado. After meeting with local health workers and reviewing available data from Benin and other countries (4, 5), it was decided that the first step should be comparing the external consultation of Gbemontin and all of the public centres in Zagnanado. We conducted an epidemiological observational retrospective study on the period from January 1st to December 31st 2007, recording all the patients that came to the external consultation in the private Centre of Gbemontin and the Public Health Centres in Zagnanado. We assumed that the population who came to both centres had the same socio-demographic characteristics and were mainly from the area of Zagnanado.

From this non-probabilistic sampling, we recorded the age, gender and possible diagnosis of each patient. Childbirth assistance was not included because the public centres completely fulfil these assignments. Seventeen diagnostic categories were described to group all different pathologies. We obtained a complete and suitable list of more than 60.000 patients, which was entered in Excel. All data were analysed with Epidat free software (version 3.1). For pathology distribution comparison, the χ^2 test was used.

3. RESULTS

In total, 36.563 patients attend the different public centres of Zagnanado, and 24.600 receive consultation consult at Gbemontin, so 40% of the patients chose to attend the new private centre. Between 2001 and 2007, the number of patients who consulted at Gbemontin increased from 20.701 to 24.600, which is an increase of 18.8%.

More than one-third (34%) of the people who came to our new dispensary were diagnosed with malaria, 14.45% suffered from respiratory diseases (mainly acute infections of the lower respiratory system) and 13.5% had no established diagnoses. Among the patients who went to the public health care centres of Zagnanado's commune, 42% had not established a defined diagnosis, 15% were diagnosed with respiratory diseases and 7.8% were diagnosed with malaria (Figure 1).

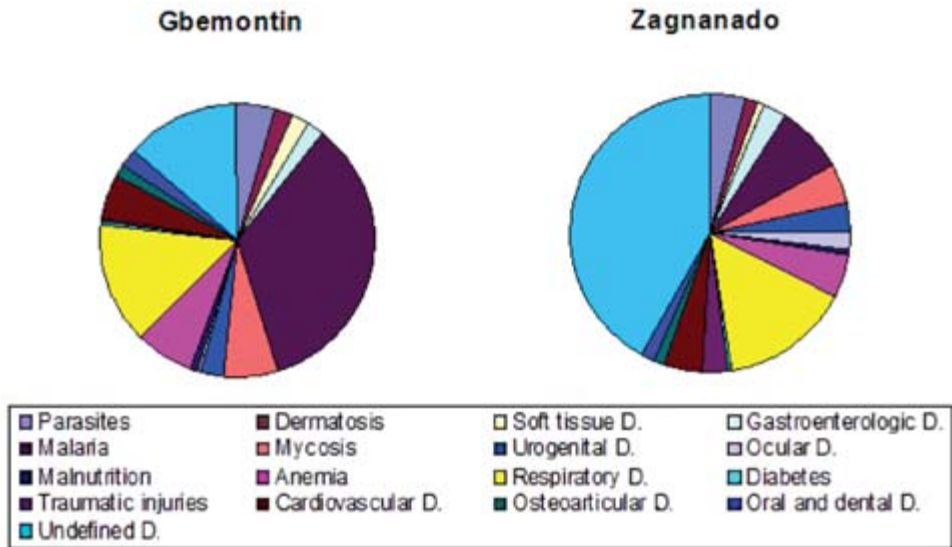


Figure 1. Different pathologies diagnosed at the private Gbemontin centre and the Public Health Centres of Zagnanado in 2007. Significant differences were found when comparing pathology distribution between the Gbemontin and Zagnanado centres for every diagnosis group ($p < 0.05$).

The patients who visited both centres were almost 50% children and 50% adult. In Table 1 we can see the different problems which drove both children and adults to go to both Health care centres. If we look at the differences between children (< 15 years of age) and adults, diseases such as mycosis, anaemias not caused by malaria, malnutrition and respiratory diseases were much more common in children. On the other hand, cardiovascular diseases represented 9% of diagnosed adults, while barely any children had this disease. The percentage of undiagnosed patients was higher in adults.

No significant differences were found according to gender, except in the well-known disease groups such as breast-diseases or urinary system infections, in both centres.

Table 1. Comparison of diagnosis in child and adult populations

	Zagnanado		Gbemontin	
	Children % (n)	Adults % (n)	Children % (n)	Adults % (n)
Parasites	4 (783) ^a	4 (704)	3 (308)	6 (854)
Dermatosis	1 (147)	2 (414)	1 (119)	3 (400)
Soft tissue D.	1 (200)	0 (67)	2 (223)	2 (303)
Gastroenterologic D.	4 (689)	2 (359)	3 (350)	1 (117)
Malaria	10 (1.878)	5 (983)	31 (3.315)	37 (5.050)
Mycosis	6 (1.162)	3 (505)	11 (1.191)	3 (386)
Urogenital D.	3 (521)	4 (713)	3 (275)	3 (405)
Ocular D.	2 (366)	2 (319)	0 (44)	0 (39)
Malnutrition	1 (264)	0 (8)	2 (246)	0 (0)
Anemia	8 (149)	2 (292)	13 (1.365)	2 (288)
Respiratory D.	21 (3.823)	9 (1.695)	22 (2.360)	9 (1.195)
Diabetes	0 (4)	0 (84)	0 (11)	1 (112)
Traumatic injuries	3 (479)	3 (632)	0 (22)	1 (86)
Cardiovascular D.	1 (101)	8 (1.530)	0 (17)	9 (1.250)
Osteoarticular D.	0 (23)	2 (398)	0 (20)	3 (362)
Oral and dental D.	0 (72)	3 (506)	1 (61)	4 (490)
Undefined D.	33 (6.023)	50 (9.327)	8 (880)	18 (2.456)
Total	(18 027)	(18 536)	(10 807)	(13 793)

^a numbers in brackets are the total diagnosis for each group.

4. DISCUSSION

The results showed several differences between the public Health Care Centres and the new private Centre of Gbemontin. Forty-two percent of all patients who came to the public centres did not receive a definitive diagnosis; this figure increases to 50% in the adult population. This clearly shows that despite an effort can be made to improve the quality of care and data collection. When applied to health centres, this effort can instantly improve the attention accorded to very needy patients.

The big difference observed in the diagnosis of malaria could be due to the fact that malaria drugs were cheaper in our centre

due to partial financing by volunteer organisations. Also, our centre specialises in surgery and other pathologies not covered by the private centres (6).

Compared with data from the WHO and the US Agency for International development (7, 8), we also found that the principal reasons for health visits in Benin are, in general, malaria and respiratory infections (37% and 17%); however, it is important to consider the large number of undiagnosed patients.

In this first study, we did not include hospitalised patients or look at patient mortality and seasonal epidemiology. Further studies should be designed to help determine the importance of this new private centre on these statistics.

The principles of our service are applicable to any hospital in a developing country. These principles are national and foreign investments, a well-trained staff that covers the health problems not covered already by public services (including new illnesses), preventive and curative care and effective education in health. Of course, a detailed evaluation program is also essential to success. Specific dispensary centres may represent a reasonable solution to a neglected component of primary health care in many developing countries, which, although with few health resources, would benefit from a more rational management than the current system provides.

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